CLAIMS

1. A device for use in a wireless communication system comprising:

an input device for receiving a handoff trigger signal at a first mode respective to a first coverage area of the communication system; an output device for delivering the handoff signal at a second mode respective to a second coverage area; a converter for translating the handoff trigger signal from the first mode into the second mode; the second mode handoff signal for indicating to a subscriber station operating in the second mode within both of the coverage areas to switch from the second mode to the first mode so that the subscriber station operates in the first coverage area.

2. The device according to claim 1 wherein said first coverage area and said second coverage area of said system are based on a protocol selected from the group consisting of CDMA, TDMA, GSM, GPRS, AMPS and FDMA.

3. The device according to claim 3 wherein said protocols respective to said coverage areas are different.

4. The device according to claim 1 wherein said handoff trigger signal is a conventional CDMA re-direction signal, and wherein said first mode is a first frequency and said second mode is a second frequency different from said first frequency.

5. The device according to claim 4 wherein said first coverage area and said second coverage area are served by respective CDMA base stations.

6. The device according to claim 5 wherein said device is integral with one of said base stations.

7. The device according to claim 4 wherein said converter comprises a down-converter operable to receive said handoff trigger signal from said input device and for

converting said handoff trigger from said first frequency to an intermediate frequency and an up-converter for converting said intermediate frequency to said second frequency.

8. The device according to claim 7 further comprising a microcontroller operably connected to said down-converter and said up-converter such that said first frequency and said second frequency is user-selectable.

9. The device according to claim 9 wherein said microcontroller is further operable to perform at least one of logging various conversions performed by said converter, and generating alarms if said converter operates outside of desired specifications.

10. A method of generating a handoff trigger signal comprising the steps of:

receiving a trigger signal at a first mode respective to a first coverage area;

converting said trigger signal from said first mode to a second mode respective to a second coverage area; and,

outputting said trigger signal into said second coverage area.

11. The method according to claim 10 wherein said first coverage area and said second coverage area are based on a protocol selected from the group consisting of CDMA, TDMA, GSM, GPRS, AMPS and FDMA.

12. The method according to claim 11 wherein said protocols respective to said coverage areas are different.

13. The method according to claim 10 wherein said handoff trigger signal is a conventional CDMA re-direction signal, and wherein said first mode is a first frequency and said second mode is a second frequency different from said first frequency.

14. The method according to claim 13 wherein said first coverage area and said second coverage area are served by respective CDMA base stations.

15. The method according to claim 14 wherein said device is integral with one of said base stations.

16. The method according to claim 13 further comprising the step of receiving an input signal identifying at least one said frequencies for use in performing the remainder of the steps.

17. A system for performing handoff comprising:

a first base station operating a first mode and operable to generate a handoff trigger signal at said first mode;

a second base station operating a second mode;

a handoff device including an input device for receiving said handoff trigger signal at said first mode; an output device for delivering said handoff signal at said second mode in a coverage area respective to said second base station; a converter for translating the handoff trigger signal from the first mode into the second mode; the second mode handoff signal for indicating to a subscriber station operating in the second mode within both of the coverage areas to switch from the second mode to the first mode.

18. The system according to claim 17 wherein said first base station and said second base station of said system are based on a protocol selected from the group consisting of CDMA, TDMA, GSM, GPRS, AMPS and FDMA.

19. The system according to claim 18 wherein said protocols respective to said coverage areas are different.

20. The system according to claim 17 wherein said handoff trigger signal is a conventional CDMA re-direction signal, and wherein said first mode is a first frequency and said second mode is a second frequency different from said first frequency.

21. The system according to claim 17 wherein said handoff device is integral with said first base station.

22. The system according to claim 20 wherein said converter comprises a down-converter operable to receive said handoff trigger signal from said input device and for converting said handoff trigger from said first frequency to an intermediate frequency and an up-converter for converting said intermediate frequency to said second frequency.

23. The system according to claim 22 further comprising a microcontroller operably connected to said down-converter and said up-converter such that said first frequency and said second frequency is user-selectable.

24. The system according to claim 23 wherein said microcontroller is further operable to perform at least one of logging various conversions performed by said converter, and generating alarms if said converter operates outside of desired specifications.

25. A method of performing handoff of a subscriber station in a system that includes: a first base station operating a first mode and operable to generate a handoff trigger signal at said first mode; a second base station operating a second mode; a handoff device including an input device for receiving said handoff trigger signal at said first mode; an output device for delivering said handoff signal at said second mode in a coverage area respective to said base station; a converter for translating the handoff trigger signal from the first mode into the second mode, said method comprising the steps of:

operating said subscriber station said second mode;

receiving, at said subscriber station, said second mode handoff signal;

switching said subscriber station from said second mode to said first mode based on said received second mode handoff signal.

26. A handoff trigger signal delivered at a first mode within a first coverage area and receivable by a subscriber station operating at said first mode in said first coverage area, said handoff trigger signal for indicating to said subscriber station to switch from said first mode to a second mode respective to a second coverage area, said handoff trigger signal having been generated by device operable to convert said handoff trigger signal from said second mode to said first mode.

27. A device for use in a wireless communication system comprising:

an input device for receiving a handoff trigger signal at a first mode respective to a first coverage area of the communication system; an output device for delivering the handoff signal at least one additional mode respective to at least one additional coverage area; a converter for translating the handoff trigger signal from the first mode into the additional mode; the additional mode handoff signal for indicating to a subscriber station operating in the additional mode within the coverage areas to switch from the additional mode to the first mode so that the subscriber station operates in the first coverage area.

28. A method for performing handoff comprising the steps of:

receiving a CDMA handoff signal at a first frequency;

converting said received signal from said first frequency to an intermediate frequency;

converting said intermediate frequency trigger signal to a second frequency; and,

outputting said signal at said second frequency.

29. A device for performing handoff comprising:

means for receiving a CDMA handoff signal at a first frequency;

means for converting said received signal from said first frequency to an intermediate frequency;

means for converting said intermediate frequency trigger signal to a second frequency; and,

means for outputting said signal at said second frequency.

30. A base station for use in a wireless communication system comprising a radio-transceiver for receiving and transmitting radio communications to a plurality of subscriber stations, data-processing equipment for carrying at least a portion of said communications over a backhaul, said base station further including a device for performing handoff comprising an input device for receiving a handoff trigger signal at a first mode respective to a first coverage area of the communication system; an output device for delivering the handoff signal at a second mode respective to a second coverage area; a converter for translating the handoff trigger signal from the first mode into the second mode; the second mode handoff signal for indicating to a subscriber station operating in the second mode within both of the coverage areas to switch from the second mode to the first mode so that the subscriber station operates in the first coverage area.

31. The base station according to claim 30 wherein said base station is based on the CDMA protocol.

32. The base station according to claim 30 wherein the radio-transceiver is operable to receive and transmit radio communications to the plurality of subscriber stations in the first mode.

33. The base station according to claim 30 further comprising a handoff trigger generator for generating the handoff trigger signal.

34. A handoff device for use in a wireless CDMA communication system comprising an input device for receiving a CDMA re-direction signal at a first frequency respective to a first coverage area of said communication system; a first converter connected to said input device for converting said CDMA re-direction signal from said first frequency to an intermediate frequency; a second converter connected to said first converter for converting said CDMA re-direction signal from said intermediate frequency to a second frequency; an output device connected to said second converter for delivering said CDMA re-direction signal at said second frequency within a second coverage area; said CDMA re-directional signal for indicating to a subscriber station operating in said second frequency and within both of said coverage areas to switch from said second frequency to said first frequency so that said subscriber station operates in said first coverage area.